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LANDFILL METHANE
OUTREACH PROGRAM

Tennessee State Primer

A Primer on Developing Tennessee's Landfill Gas Energy Potential

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Introduction

1. The Goals of This Primer

Throughout the country, the number of landfill gas energy projects is growing. Recovering methane gas at solid waste landfills provides significant environmental and economic benefits by eliminating methane emissions while capturing the gas's energy value. The methane captured from landfills can be transformed into a cost-effective fuel source for generating electricity and heat, firing boilers, or even powering vehicles.

Permits, incentive programs, and policies for landfill gas energy project development vary greatly from state to state. To guide landfill gas energy project developers through the state permitting process and to help them to take advantage of state incentive programs, the U.S. Environmental Protection Agency's (EPA's) Landfill Methane Outreach Program (LMOP) has worked with state agencies to develop individual primers for states participating in the State Partner Program. By presenting the latest information on federal and state regulations and incentives affecting landfill gas energy projects in this primer, LMOP and Tennessee state officials hope to facilitate development of many of the landfills listed in Table C on page 5.

To develop this primer, the state of Tennessee identified all the permits and funding programs that could apply to landfill gas energy projects developed in Tennessee. It should be noted, however, that the regulations, agencies, and policies described are subject to change. Changes are likely to occur whenever a state legislature meets or when the federal government imposes new directions on state and local governments. Landfill gas energy project developers should verify and continuously monitor the status of laws and rules that might affect their plans or the operations of their projects.

Who Should Read This Primer?

This primer is designed to help realize the potential of landfill gas recovery in the state of Tennessee. It provides information for developers of landfill gas energy projects, as well as all other participants in such projects:

- Landfill owners/operators
- Utility companies
- Independent power producers
- Utility regulators
- Community officials
- State regulators
- Engineers
- Equipment vendors

What Information Does This Primer Contain?

If you are interested in taking advantage of the economic and environmental opportunities in landfill gas energy recovery in Tennessee, you will need to know the regulatory requirements that apply. You will also need to know what economic incentives are available to help make these projects more economically viable.

To address these needs, this primer covers the following topics:

- *Federal Regulations and Permits.* This section provides information on federal regulations that may pertain to landfill gas energy projects, including solid waste, air quality, and water quality regulations.
- *State Regulations and Permits.* This section provides information on state permits that apply to landfill gas recovery projects in Tennessee.
- *Local Regulations and Permits.* Local permit approval will often be needed for landfill gas energy projects.
- *Federal Incentive Programs.* This section presents information on federal incentives that may apply to landfill gas energy projects.
- *State Incentive Programs.* This section presents information about environmental infrastructure financing opportunities in the state of Tennessee.
- E*lectricity Restructuring.* This section discusses how renewable energy provisions in state electricity restructuring regulations might apply to landfill gas energy projects.
- *Voluntary Reporting of Greenhouse Gases.* This section discusses a program allowing organizations to gain recognition for environmental achievements related to greenhouse gas emissions.

2. About the Landfill Methane Outreach Program

In order to promote the use of landfill gas as an energy source, EPA has established the Landfill Methane Outreach Program (LMOP). The goals of LMOP are to reduce methane emissions from landfills by:

- Encouraging environmentally and economically beneficial landfill gas energy development
- Removing barriers to developing landfill gas energy projects

To achieve these goals, EPA establishes alliances with four key constituencies:

- State environmental and energy agencies
- Energy users/providers (including investor-owned, municipal, and other public power utilities; cooperatives; direct end users; and power marketers)
- Industry (including developers, engineers, and equipment vendors)
- Community partners (municipal and small private landfill owners and operators; cities, counties, and other local governments; and community groups)

EPA establishes these alliances through a Memorandum of Understanding (MOU). By signing the MOU, each Partner acknowledges a shared commitment to promoting landfill gas energy recovery at solid waste landfills, recognizes that the widespread use of landfill gas as an energy resource will reduce methane and other air emissions, and commits to certain activities that enhance the development of this resource.

As of May 2003, more than 340 landfill methane recovery projects were operating in the United States. EPA estimates that up to 500 landfills across the United States could install economically viable landfill gas energy projects.

3. Tennessee State LMOP Task Force

The Tennessee State LMOP task force has been formed to review state regulations and policies to explore opportunities for overcoming barriers to landfill gas energy projects. The overall purpose of the state task force is to encourage information sharing and increased coordination among interested parties on landfill gas energy project development in Tennessee.

The Tennessee State LMOP task force is comprised of the following members:

Table A **Tennessee State LMOP Task Force Members**

Name	*Organization*	*Phone Number*
W. Alan Ball	Tennessee Department of Environment and Conservation (TDEC), Division of Community Assistance	
Jeff Norman	TDEC, Division of Solid Waste Management	(615) 532-0876
John Trimmer	TDEC, Division of Air Pollution Control	(615) 532-0552
Chris Garkovich	University of Tennessee County Technical Assistance Service (UT-CTAS)	(931) 528-5518
Brian Hensley	Energy Division, Tennessee Department of Economic and Community Development	(615) 741-2994
Mike Allen	Tennessee Chapter, Solid Waste Association of North America	(865) 922-2845
Libby Hill Smith	Southern Alliance for Clean Energy	(865) 637-6055
Daryl Williams	TVA Public Power Institute, Biomass & Renewable Energy, Tennessee Valley Authority	(256) 386-2973
John Boynton	Tennessee Department of Transportation, Right-of-Way Office	(615) 741-3196
Mike Gaines	Tennessee Regulatory Authority (TRA)	(615) 741-2904, ext. 220

4. Landfill Gas Energy Projects in Tennessee

The Tennessee Department of Environment and Conservation (TDEC) is a State Partner to EPA for managing LMOP, which encourages cooperation between EPA and state energy and environmental agencies to promote the development of landfill gas energy resources. This partnership focuses on developing consensus among landfill owners/operators, utility companies, independent power producers, project developers, utility regulators, and the state regulators so they can work together to promote new energy and environmental opportunities from which all Tennessee residents will benefit.

The state of Tennessee currently has four landfill gas energy projects. Table B (below) lists these projects. According to TDEC and EPA, numerous candidate landfills have the potential to support economically viable gas energy projects. Table C (on page 5) identifies some of Tennessee's candidate landfills.

5. Where to Go for More Information

Louis L. Bordenave
TDEC, Division of Solid Waste Management
401 Church Street, 8th Floor
Nashville, TN 37243-1533
Phone: (615) 532-0095
Fax: (615) 532-0199
e-mail: louis.bordenave@state.tn.us
www.tdec.net/dca

For more information about EPA's LMOP program, contact:

Chris Voell
U.S. Environmental Protection Agency
Landfill Methane Outreach Program (6202J)
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
Phone: (202) 564-6362
Fax: (202) 565-2079
e-mail: voell.christopher@epa.gov
www.epa.gov/lmop

Table B **Landfill Gas Energy Projects in Tennessee**

Landfill Name	*Landfill Owner*	*County*	*Landfill Gas to Energy Project*	*CFM*	*Tons/Day*
Bordeaux	Metro Nashville	Davidson	Powering generator since 4/1/00	1,500	Closed 1994
Chestnut Ridge	Waste Management	Anderson	Powering generator since 1/1/92	1,150	1,675
Middlepoint	BFI	Rutherford	Powering generator since 5/1/02	960	3,251
Quail Hollow	Waste Management	Bedford	Leachate evaporation since 1/1/96 and generating on-site power	860	Closed

Table C Candidate Landfills in Tennessee

(Criteria: At least 1 million tons of landfill waste in place, or design capacity greater than 2.75 million tons, and not closed for more than 5 years)

Landfill Name	*Landfill Owner*	*County*	*Tons/Day*	*Waste in Place (Tons)*	*CFM*
Alcoa-Maryville-Blount County	Alcoa-Maryville-Blount County	Blount	320	2,000,000	NA
Bi-County	Bi-County Solid Waste Management System	Montgomery	456	1,000,000	NA
Bradley County	Bradley County	Bradley	360	1,600,000	NA
Carter Valley	BFI	Hawkins	2,000	3,400,000	450
Cedar Ridge	Waste Management	Marshall	1,150	2,500,000	400
Iris Glen Environmental Center	Waste Management	Washington	1,500	2,000,000	500
Jackson-Madison County	Jackson-Madison County	Madison	450	1,700,000	NA
Jefferson County	Jefferson County	Jefferson	85	1,000,000	NA
North Shelby	BFI	Shelby	1,625	5,500,000	1,500
Northwest Tennessee Disposal Corp.	Northwest Tennessee Disposal Corp.	Obion	1,175	2,000,000	NA
Roane County	Roane County	Roane	Closed 1998	1,600,000	NA
Shelby County Penal Farm	Shelby County	Shelby	Closed 1989	2,300,000	500
South Shelby	BFI	Shelby	3,625	13,300,000	1,800
Summit	Chattanooga	Hamilton	Closed 1999	7,300,000	1,100
Twin Oaks	BFI	Knox	Closed 1993	1,670,000	1,039
West Camden	Waste Management	Benton	1,800	1,200,000	400

Part 1: Regulations and Permits

1 Overview of Federal Regulations and Permits

The following section discusses federal regulations that may pertain to landfill gas energy projects. Landfill gas energy projects can be subject to solid waste, air quality, and water quality regulations. The federal regulations are presented in general terms because individual state/local governments generally develop their own regulations for carrying out the federal mandates. Specific requirements may therefore differ among states. Project developers should contact relevant federal agencies and, in some cases, state agencies for more detailed information and applications. The discussion of each key federal regulation/permit contains three components:

- Importance of the regulation/permit to landfill gas energy project developers
- Applicability to landfill gas energy projects
- Description of each regulation/permit

1.1 Clean Air Act (CAA)

The Clean Air Act regulates emissions of pollutants to ensure that air quality meets specified health and welfare standards. The CAA contains three provisions that may affect landfill gas energy projects: (1) New Source Performance Standards (NSPS) and Emission Guidelines; (2) National Emission Standards for Hazardous Air Pollutants (NESHAP); and (3) New Source Review (NSR). Project developers who are planning to construct a new landfill gas energy system or who plan to modify a landfill operation to incorporate a landfill gas energy system must obtain a Permit to Construct (PTC) permit from the responsible regulatory agency if emissions from the project exceed the major facility emission thresholds. The PTC permit specifies the NSPS and NSR requirements that the project must meet (Chapter 1200-3-9). Landfill energy plants that are part of major sources must also obtain Title V Operating Permits that consolidate the various air regulatory and reporting requirements into a single operating permit. The general requirements of NSPS, NESHAP, NSR, and Title V for landfill gas energy projects are discussed below.

New Source Performance Standards (NSPS) and Emissions Guidelines for MSW Landfills

Importance Landfill gas energy projects can be part of a compliance strategy to meet EPA's new emissions standards for landfill gas.

Applicability Landfills meeting certain design capacity, age, and emissions criteria are required to collect landfill gas and to either flare it or use it for energy.

Description EPA final regulations under the CAA amendments require large landfills to collect and control landfill gas. Specifically, landfills that are designed to be at least 2.5 million megagrams (Mg) and 2.5 million cubic meters in size and have estimated emissions of non-methane organic compounds (NMOC) of at least 50 Mg/year must reduce their emissions of landfill gas. The regulations identify NMOC as a surrogate for landfill gas. Therefore, the emission reductions required in the rules are specified as reductions of

NMOC. Landfills can use flares or energy recovery projects to meet the emission reduction requirements.

Landfill gas emissions were targeted in these rules because of the potential negative impact on human health and the environment from the volatile organic compounds contained in the gas. In addition, the contribution of landfill gas to local smog formation, local odors, and the potential for explosions or landfill fires were included in the decision-making process.

For landfills that commenced construction before May 30, 1991, and received waste after November 8, 1987 ("existing landfills"), the Emission Guidelines (40 CFR Part 60 Subpart Cc) apply. For landfills that commenced construction, reconstruction, or modification on or after May 30, 1991 ("new landfills"), the NSPS (40 CFR Part 60 Subpart WWW) apply. The collection and control requirements of each of these standards are the same; only the start of the compliance clock differs.

The final regulations were published in the Federal Register on March 12, 1996, but clarifying amendments have been made since. The regulations (as revised) can be found in the Code of Federal Regulations at 40 CFR Part 60, Subparts Cc and WWW. Additional amendments were proposed on May 23, 2002 (67 FR 36476), but were not final as of December 2002.

Landfill gas collection systems and either gas treatment or control achieving 98 percent NMOC destruction or 20 ppmv outlet NMOC concentration are required for existing and new landfills that meet both of the following criteria:

(1) Capacity - maximum design capacity greater than or equal to 2.5 million Mg (about 2.75 million tons) and 2.5 million cubic meters.

(2) Emissions - annual NMOC emission rate is greater than 50 Mg (about 55 tons). Landfills below the capacity and emissions thresholds have reporting requirements to demonstrate their capacity and/or emission levels, but are not required to apply controls.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

Importance Landfill gas energy projects can be part of a compliance strategy to meet EPA's new emissions standards for landfill gas.

Applicability Landfills meeting certain design capacity, age, and emissions criteria are required to collect landfill gas and to either flare it or use it for energy.

Description The final municipal solid waste landfills NESHAP was published in the Federal Register on January 16, 2003 (68 FR 2227). It affects the same landfills and has the same control requirements as the NSPS and Emission Guidelines. As with the NSPS, the emission reduction requirements of the rule are specified as NMOC. Landfills with design capacities of at least 2.5 million Mg and 2.5 million cubic meters and that have estimated annual NMOC emission rates of at least 50 Mg/year are required to collect and treat or control landfill gas emissions. These control requirements are the same as the NSPS and Emission Guidelines with one exception: large landfills (i.e., those that exceed the 2.5 million Mg and cubic meters threshold) that operate part or all of the landfill as a bioreactor must install collection and control systems for the bioreactor earlier than would be required by the NSPS, even if total estimated emissions do not yet exceed 50 Mg/year.

The control systems may also be removed earlier from bioreactors. Bioreactors generate landfill gas more quickly than conventional landfills, but also generate the gas for a shorter period of time.

The NESHAP also contains additional record keeping and reporting requirements compared to the NSPS. Landfills that are required to collect and control landfill gas must develop a start-up, shutdown, and malfunction (SSM) plan and report SSM events. The NESHAP also requires semiannual compliance reporting, instead of the annual reporting required by the NSPS. The NESHAP defines types of deviations from the standards that must be reported in the semiannual reports, for example, periods when monitored control device operating parameters are outside of specified ranges.

New Source Review (NSR) Permitting Process

Importance New landfill gas projects may be required to obtain construction permits under New Source Review (NSR). Depending on the area in which the project is located, obtaining these permits may be the most critical aspect of project approval.

Applicability The combustion of landfill gas results in emissions of carbon monoxide, oxides of nitrogen, and PM-10. Requirements vary for control of these emissions depending on local air quality. The relevant standards for a particular area will be discussed in Section 2 of Part 1, Overview of State Regulations and Permits. Applicability of these standards to landfill gas projects will depend on the level of emissions resulting from the technology used in the project and the project's location (i.e., attainment or nonattainment area).

Description CAA regulations require new stationary sources and modifications to existing sources of certain air emissions to undergo NSR before they begin construction. The purpose of these regulations is to ensure that sources meet the applicable air quality standards for the area in which they are located. Because these regulations are complex, a landfill owner or operator may want to consult an attorney or expert familiar with NSR for more information about permit requirements.

The existing CAA regulations for attainment and maintenance of ambient air quality standards regulate six criteria pollutants: ozone, nitrogen dioxide (NO2), carbon monoxide (CO), particulate matter (PM-10), sulfur dioxide (SO2), and lead. The CAA authorizes the EPA to set both health and public welfare-based national ambient air quality standards (NAAQS) for each criteria pollutant. Areas that meet the NAAQS for a particular air pollutant are classified as being in "attainment" for that pollutant and those that do not are in "nonattainment." Because each state is required to develop an air quality implementation plan (called a State Implementation Plan or SIP) to attain and maintain compliance with the NAAQS in each Air Quality Control Region within the state, specific permit requirements will vary by state. (See 40 CFR 51.160-51.166 for more information.)

The location and size of the landfill gas energy project will dictate what kind of construction and operating permits are required. If the landfill is located in an area that is in attainment for a particular pollutant, the landfill gas energy project may have to undergo Prevention of Significant Deterioration permitting. Nonattainment Area permitting is required for those landfills that are located in areas that do not meet the NAAQS for a particular air pollutant. Furthermore, the level of emissions from the project determines whether the project must undergo major NSR or minor NSR. The requirements of major

NSR permitting are greater than those for minor NSR. The following provides more detail on new source permits:

Prevention of Significant Deterioration Permitting

Prevention of Significant Deterioration (PSD) review is used in attainment areas to determine whether a new or modified emissions source will cause significant deterioration of local air quality. Tennessee Department of Air Pollution Control (APC) can assist landfill gas energy project developers in determining whether a proposed project requires PSD approval. Applicants must determine PSD applicability for each individual pollutant.

For each pollutant for which the new or modified source is considered major (i.e., exceeds specified emission thresholds), the PSD major NSR permitting process requires that the applicants determine the maximum degree of reduction achievable through the application of available control technologies. Specifically, major sources may have to undergo any or all of the following four PSD steps:

- Best Available Control Technology (BACT) analysis
- Monitoring of local air quality
- Source impact analysis/modeling
- Additional impact analysis/modeling (i.e., impact on vegetation, visibility, and Class I areas)

(See 40 CFR Part 52.21 for more information on PSD.)

Minor sources and minor modifications are exempt from this process, but these sources must still obtain construction and operating air permits. See Chapter 1200-3-9 for more information.

Nonattainment Air Permitting

A source located in an area that has been designated nonattainment for one or more of the six criteria pollutants may be subject to the nonattainment for such pollutant. Ozone is the most pervasive nonattainment pollutant and the one most likely to affect landfill gas energy projects. Because NOx and VOC emissions contribute to ozone formation, the emission thresholds that trigger major NSR and the control requirements are more stringent in ozone nonattainment areas than in attainment areas. Therefore, NOx permitting has been an issue for some landfill energy projects.

A proposed new emissions source or modification of an existing source located in a nonattainment area must undergo nonattainment major NSR if the new source or the modification is classified as major (i.e., if the new or modified source exceeds specified emissions thresholds). To obtain a nonattainment NSR permit for criteria pollutants, a project must meet two requirements:

- It must use technology that achieves the Lowest Achievable Emissions Rate (LAER) for the nonattainment pollutant.
- It must arrange for an emissions reduction at an existing combustion source that offsets the emissions from the new project at specific ratios.

Potential Exemptions

EPA furnished a guidance document to state and regional permitting authorities that provides an exemption from major NSR permitting requirements for landfill projects that qualify as “pollution control projects.” An existing landfill that plans to install a landfill gas energy recovery project may qualify as a pollution control project as long as it reduces non-methane organic compounds (NMOC) at the site. Under the guidance,

the permitting authority may exempt the project from major NSR, provided it meets all other requirements under the CAA and the state, including minor source requirements. In nonattainment areas, offsets will still be required, but need not exceed a 1:1 ratio. States have discretion to exercise the increased flexibility allowed by the guidance on a case-by-case basis.

Title V Operating Permit

Importance Many landfill gas energy projects must obtain operating permits that satisfy Title V of the 1990 CAA Amendments.

Applicability Any landfill or landfill gas energy plant that is a major source, as defined by the Title V regulation (40 CFR Part 70), must obtain an operating permit.

Description Title V of the CAA requires that all major sources obtain new federally enforceable operating permits. The purpose of the permit is to consolidate all air emission limits, monitoring, record keeping, and reporting requirements that apply to the source in a single permit. Each major source must submit an application for an operating permit that meets guidelines spelled out in individual state Title V programs. The operating permit describes the emission limits and operating conditions that a facility must satisfy and specifies the reporting requirements that a facility must meet to show compliance with the applicable air pollution regulations (e.g., NSPS, NESHAP, NSR). A Title V operating permit must be renewed every five years.

1.2 Resource Conservation and Recovery Act Subtitle D

Importance Before a landfill gas energy project can be developed, all Resource Conservation and Recovery Act (RCRA) Subtitle D requirements (i.e., requirements for non-hazardous waste management) must be satisfied.

Applicability Methane is explosive in certain concentrations and poses a hazard if it migrates beyond the landfill facility boundary. Landfill gas collection systems must meet RCRA Subtitle D standards for gas control.

Description Since October 1979, federal regulations promulgated under Subtitle D of RCRA have required controls on the migration of landfill gas. In 1991, EPA promulgated landfill design and performance standards. The newer standards apply to municipal solid waste landfills that were active on or after October 9, 1993. Specifically, the standards require monitoring of landfill gas and establish performance standards for combustible gas migration control. Monitoring requirements must be met at landfills not only during their operation, but also for a period of 30 years after closure.

Landfills affected by RCRA Subtitle D are required to control gas by establishing a program to periodically check for methane emissions and prevent offsite migration. Landfill owners and operators must ensure that the concentration of methane gas does not exceed:

- Twenty-five percent of the lower explosive limit for methane in facilities' structures
- The lower explosive limit for methane at the facility boundary

Permitted limits on methane levels reflect the fact that methane is explosive within the range of 5 to 15 percent concentration in air. If methane emissions exceed permitted limits, corrective action (i.e., installation of a landfill gas collection system) must be taken.

Subtitle D may provide an impetus for some landfills to install energy recovery projects in cases where a gas collection system is required for compliance. (See 40 CFR Part 258 for more information.)

1.3 National Pollutant Discharge Elimination System (NPDES) Permit

Importance Landfill gas energy projects may need to obtain NPDES permits for discharging wastewater that is generated during the energy recovery process.

Applicability Landfill gas condensate forms when water and other vapors condense due to temperature and pressure changes within the collection system. This wastewater must be removed from the collection system. In addition, landfill gas energy projects may generate wastewater from system maintenance and cooling tower blow down.

Description NPDES permits regulate discharges of pollutants to surface waters. The authority to issue these permits is delegated to state governments by EPA. The permits, which typically last five years, limit the quantity and concentration of pollutants that may be discharged. To ensure compliance with the limits, permits require wastewater treatment or impose other operation conditions. The state water offices or EPA regional office can provide further information on these permits.

The permits are required for three categories of sources and can be issued as individual or general permits. A landfill gas energy project would be included in the “wastewater discharges to surface water from industrial facilities” category and would require an individual permit. An individual permit application for wastewater discharges typically requires information on:

- Water supply volumes
- Storm water treatment
- Water utilization
- Plant operation
- Wastewater flow
- Materials and chemicals used
- Characteristics and disposal methods
- Production
- Planned improvements
- Other relevant information

1.4 Clean Water Act, Section 401

Importance Landfill gas energy projects may need Clean Water Act (CWA) Section 401 certification for constructing pipelines that cross streams or wetlands.

Applicability Landfill gas recovery collection pipes or distribution pipes from the landfill to a nearby gas user may cross streams or wetlands. When construction or operation of such pipes causes any discharge of dredge into streams or wetlands, the project may require Section 401 certification.

Description If the construction or operation of facilities results in any discharge into streams or wetlands, such construction is regulated under Section 401. This requirement may affect the construction of landfill gas energy project facilities or pipelines to transport landfill gas.

The applicant must obtain a water quality certification from the state in which the discharge will originate. The certification should then be sent to the U.S. Army Corps of Engineers. The certification indicates that such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA.

1.5 Other Federal Permit Programs and Regulatory Requirements

The following are brief descriptions of how other federal permits could apply to landfill gas energy project development:

- IRCRA Subtitle C could apply to a landfill gas energy project if it produces hazardous waste. While some landfill gas energy projects can return condensate to the landfill, many dispose of it through the public sewage system after some form of onsite treatment. In a few cases, the condensate may contain high enough concentrations of heavy metals and organic chemicals for it to be classified as a hazardous waste, thus triggering federal Subtitle C regulation.
- The Historic Preservation Act of 1966 or the Endangered Species Act could apply if power lines or gas pipelines associated with a project infringe upon a historic site or an area that provides habitat for endangered species.
- Requirements of the Uniform Relocation Assistance and Real Property Acquisitions Act of 1970, as amended (Uniform Act), will apply to landfill gas energy projects, if federal funds are used for any part of project design, right of way acquisition, or construction. The Federal Highway Administration is the lead agency for issues concerning the Uniform Act.

2. Overview of State Regulations and Permits

This section provides information on permits required by the state of Tennessee for the development of a landfill gas energy project. For an overview of required permits, contact information, and length of the review period, see Table 2.1. Tables 2.2 through 2.4 present more detailed information about the required permits. Information provided on each permit includes:

- How the permit is applicable to landfill gas projects
- The appropriate agency contact
- A description of the permit
- The regulation
- Information required and suggestions for a successful application
- The application and review process
- The review/approval period
- Any fees required

2.1 Summary of Permits

The principal permits for landfill gas energy projects in Tennessee are related to solid waste, air, and water quality. These are regulated by the Tennessee Department of Environment and Conservation (TDEC).

Table 2.1 Summary Table of State Regulations/Permits

Type of Standard	*Permit Agency/Contact*	*Review/Approval*
Air Construction Permit Operation	John Trimmer/TDEC	2-12 months (minor) 5-12 months (major)
State Operating Permit	John Trimmer/TDEC	2-4 months
Title V Operating Permit	John Trimmer/TDEC	18 months
Solid Waste Landfills Solid Waste Management Permit	Jeff Norman/TDEC	270 days
Water NPDES	Saya Qualls/TDEC	180 days (minor) 1 year (major)
Certificate of Convenience And Necessity	Mike Gaines/TRA	no set time

Table 2.2 Air Quality Construction Permit and Title V Operating Permits

Agency Contact	John Trimmer TDEC, Division of Air Pollution Control 401 Church Street, 9th Floor, L&C Annex Nashville, TN 37243-1531 Phone: (615) 532-0552 Fax: (615) 532-0614 E-mail: John.Trimmer@state.tn.us
Description	Any person wishing to construct an air contaminant source or to modify an existing air contaminant source is required to obtain a construction permit from the Tennessee Division of Air Pollution Control (TDAPC). A Title V Operating Permit is required of companies that have operations involving a major air contaminant source. A state operating permit is required for new construction permit applicants who are non-Title V sources.
Regulation	*Chapter 1200-3-9* *Construction and Operating Permits* *Chapter 1200-3-3* *Hazardous Air Pollutant Control Requirements*\ *Chapter 1200-3-16* *New Source Performance Standards (NSPS)*
Information Required/ Suggestions	For all air contaminant sources located in Davidson, Hamilton, Knox, or Shelby counties, the applicant must contact and obtain a permit from the applicable county air permit agency. For all other counties, applications and assistance can be obtained by contacting the TN Environmental Assistance Center at (888) 891-8332. ***Air Quality Construction Permit*** • Permit Application Form (Form # CN-0730 - APC -20) requires the address of the facility, principal contact, brief description of emission source, and the estimated construction start and completion dates. • Process or Fuel Burning Source Description Form (Form # CN-0741 - APC 21/24) requires more detailed information about process and equipment specifications and fuel type and usage. • The emission point description form (Form # CN-0742 - APC -22) requires information regarding the quantification of the pollutants emitted. • See www.state.tn.us/environment/permits/airconst.htm. ***State Operating Permit*** • Persons planning to operate an air contaminant source require a State Operating • Permit from the TDAPC. Facilities that emit more than 100 tons per year (tpy) of an air pollutant, 10 tpy of a hazardous air pollutant, and /or 25 tpy of a combination of hazardous air pollutants are not eligible for a State Operating Permit but must obtain a Title V Operating Permit (see below).

- Permit Application Form (Form # CN-0730 - APC 20) requires the address of the facility, principal contact, and a brief description of emission source.
- Construction Permit applicants who are non-Title V sources are required to apply for a State Operating Permit within 30 days of startup.

Title V Operating Permit

- Forms APC V. Index - V.31 series (Forms V. Index, V.1, V.2, V.3, V.4 / V.5, V.10, V.11, V.19, V.20 - V.27, V.28, V.29, V.30, and V.31)
- Facility identification information.
- Stack identification information.• Description of equipment and processes and products.
- Emissions of regulated air pollutants and emissions related information.
- Fuels, fuel use, raw materials, production rates, and operating schedules.
- Information on air pollution control systems.
- Statement of Completeness and Certification of Compliance with all applicable regulations.
- Compliance methods for assurance of compliance with applicable requirements.
- See www.state.tn.us/environment/permits/title5.htm.

Application Review Process

When construction permit or Title V permit applications are submitted, TDAPC reviews them for completeness. TDAPC makes a completeness determination within 60 days of the receipt of a Title V permit application and within 30 days of the receipt of a construction permit application. The applicant is notified in writing of adequacy or any deficiencies.

Air Quality Construction Permit

- Upon receipt of a construction permit application, a public notice is published in a newspaper of local circulation in the proximity of the applicant. A construction permit for a minor source must be issued within 115 days after receipt of a complete application.
- Major source (PSD) draft construction permits go through a public review process where the public, affected states, and EPA's comments are solicited. A public hearing is held if significant interest is displayed. After considering public comments and a final supervisory review, a final decision is made, and the permit is issued or denied. For PSD major sources, the permit is to be issued within six months after receipt of a complete application.
- Construction permits are issued for the period of time required to complete construction and to meet any startup conditions identified in the permit, which is approximately one year.

State Operating Permit

- When the applications are submitted, TDAPC reviews them to determine adequacy.

Title V Operating Permit

- Upon receipt of a complete application, TDAPC prepares a draft permit. The draft permit is then subject to review by the public, affected states, and EPA. A notice giving general information about the permit will be published in a local newspaper. This notice will afford the public an opportunity to: (a) comment on the proposed permit; and (b) request a public hearing on the permit. The normal duration of a Title V operating permit is three to five years.

Review/Approval Period

Air Quality Construction Permit

- Generally, the entire permit process may take two to four months for minor sources and five to more than 12 months for major sources.

State Operating Permit

- Generally, an operating permit is issued within two to four months. The normal duration of a state operating permit is nine to 10 years.

Title V Operating Permit

- The entire permit process may take from six months to more than twelve months. The normal duration of a Title V operating permit is three to five years.

Fees

Air Quality Construction Permit

Application fees for the Air Quality Construction Permit are based upon the emission rate per year:

Anticipated Maximum Emission Rate	*(Filing/Processing) Permit Fee*
Less than 10 Tons/Year	$100.00
10 to < 100 Tons/Year	$500.00
100 to < 250 Tons/Year	$1,000.00
250 to < 500 Tons/Year	$2,000.00
500 to < 1,000 Tons/Year	$3,000.00
1,000 to < 5,000 Tons/Year	$4,000.00
5,000 to Greater Tons/Year	$5,000.00

State Operating Permit

Application Fees: There are no application fees at this time.

Annual Emission Fees (2002):

- Minor Sources (under 100 tons):
  The rate is $12.50 per ton of allowable emissions. A source of less than 10 tpy is exempt from minor source fees, provided that such source has not taken a limitation on its permit that would render it a conditional major or synthetic minor source. Minor source fees are based on the sum of the allowable and/or actual emissions of all regulated pollutants at the source. An annual emission fee is not charged for carbon monoxide. All annual emission fees are due by the first day of the month in which the fee is due (based upon the county in which the source is located).

Title V Operating Permit

Application Fees: There are no application fees for the Title V permit.

Annual Emission Fees (2001-2002):

- Major Sources (Title V):
  The rate is $21.70 per ton for actual emissions or $13.00 per ton for allowable emissions. Title V fees were due by July 1, 2002, following the end of the annual accounting period (June 30, 2002).

Table 2.3 Solid Waste Management Permit

Agency Contact	Jeff Norman TDEC, Division of Solid Waste Management 401 Church Street, 5th floor Nashville, TN 37243-1533 Phone: (615) 532-0876 Fax: (615) 532-0886 e-mail: jeff.norman@state.tn.us
Regulation	*1200-01-07* *Solid Waste Management Permit and Terms of the Permit* Persons who wish to construct or operate a solid waste disposal facility must obtain a landfill permit from the Tennessee Division of Solid and Hazardous Waste Management. The following types of disposal facilities require permits: • *Class I disposal facility:* Takes non-hazardous municipal solid wastes (e.g., household wastes), approved special wastes, and commercial wastes. • *Class II disposal facility:* Takes non-hazardous industrial wastes, commercial wastes, and fill. • *Class III disposal facility:* Takes Class IV wastes, plus landscaping, land clearing, and farming wastes. • *Class IV disposal facility:* Takes construction/demolition wastes, shredded tires, and waste with similar characteristics. Facilities covered by Permit-by-Rule, junkyards, and other exempted solid waste disposal facilities or practices are not required to obtain a landfill permit.
Information Required/ Suggestions	The applicant must submit the following items to the Division of Solid and Hazardous Waste Management staff at the appropriate Environmental Assistance Center. ***Part I:*** • A completed application (Form CN-1036) that includes: the name, address, and phone numbers of the owner(s); proposed activities to be conducted at the facility; and a statement regarding whether the facility is subject to local approval (TCA § 68-211-701) and county approval, if necessary. • A topographic map showing: the facility; property boundaries to 1/2 mile past the boundaries; each waste processing or disposal unit; and wells, springs, and other surface water bodies within 1/4 mile of the property boundaries. • A disclosure statement containing information concerning past performance in waste management fields of the applicant, as well as officers, directors, and/or partners of the applicant's business.

	Part II: • A hydrogeologic assessment of the potential site. • Facility design plans and operations manual. • Financial assurance demonstrating the financial responsibility for closure and post-closure care. • Other specific requirements for Class I, II, III, and IV disposal facilities. A new facility cannot begin construction without submitting Parts I and II and receiving an effective permit.		
Application Process	Permit applications are evaluated by inspecting the facility and checking its consistency with Parts I and II to determine whether performance and design standards have been met.		
Review Process	After the Part I application is received and reviewed for completeness, a preliminary public notice is issued. The state archeologist reviews the site for the existence of burial grounds. The Part II items then are submitted to the Division and are reviewed by a committee. When all documents and approvals have been met, a second public notice of intent to issue a permit is issued. Public response to this second notice may generate another public notice to hold a public hearing. If requested, the Division may give notice of a public hearing concurrently with the second public notice of intent to issue a permit. After review of the public comments, a final public notice with the permit decision is issued.		
Review/ Approval Period	The application normally is processed in at least 270 days. The entire permit process may take from 16 to 32 months, depending on the type of facility, public interest, public hearings, revisions, appeals, and site preparation. Landfill permits are valid for the life of the facility, as permitted, as long as it complies with regulations and annual maintenance fees are paid.		
Fees	Class I and Class II (Hydrogeologic plan)		$4,000
	Class I and Class II (Design and construction plans)		$6,000
	Class III and Class IV		$3,000
	Major Modifications		$2,000
	Annual maintenance fees:		
	Class I (tons/year)	Greater than 100,000	$15,000
		50,000 to 100,000	$10,000
		25,000 to 50,000	$6,000
		10,000 to 25,000	$2,000
		Less than 10,000	$1,000
	Class II (tons/year)	Greater than 1,000	$5,000
		Less than 1,000	$2,000
	Class III and IV		$2,000

Table 2.4 NPDES Permit/Tennessee State Operating Permit

Agency Contact	Saya Qualls TDEC, Division of Water Pollution Control 401 Church Street 6th Floor, L&C Annex Nashville, TN 37243-1534 Phone: (615) 532-0652 Fax: (615) 532-0503 e-mail: saya.qualls@state.tn.us
Information Required/ Suggestions	• General Information: EPA Application Form 1 • Wastewater Discharge Information: EPA Application Form 2C • New Sources and New Dischargers: Application for Permit to Discharge Process Wastewater: EPA Application Form 2D • Facilities Which Do Not Discharge Process Wastewater: EPA Application Form 2E • Application for Permit to Discharge Storm Water Associated With Industrial Activity: EPA Application Form 2F • Form CN-1090 is required to identify the parties responsible for different aspects of the permit. In most cases, topographic maps, process flow line diagrams, and extensive sampling data are required with the applications. A preliminary engineering report and treatability analysis also may be required where unusual or complex wastewater treatment systems may be needed.
Application Process	Applications and assistance can be obtained from the Division of Water Pollution Control.
Review Process	A public hearing is held if significant interest is displayed. After considering public comments, the appropriate revisions are made, and the final permit is issued. A permit may be appealed to the Water Quality Control Board up to 30 days after the final permit is received.
Review/Approval Period	The Division must make permit decisions within one year of receipt of a complete application for major facilities and within 180 days of receipt of a complete application for minor facilities. The permit process can take from six to 12 months. Normally, the permit is issued for a term of five years. Under the current development phase of the WPC Watershed Initiative, however, permits may be issued for less than five years to synchronize the permit. If approved, a draft permit is prepared, and a public notice is issued. The applicant is given 25 days and EPA is given 60 days to review and comment on the draft permit. EPA does not review all draft permits.
Fees	Plan review fees vary from $250 to $1,500, depending on the design flow capacity of the facility and the size of a mining site in acres. These fees are due with the application. Annual maintenance fees vary from $500 to $7,500, depending on the volume of discharge or the size of disturbance in acres on a mining site and the Standard Industrial Classification (SIC) code of the facility.

2.2 Permitting Assistance

The staff of TDEC is available to provide assistance during the permitting process. The Environmental Assistance Center (EAC) can be reached at (888) 891-8332.

2.3 Tennessee Regulatory Authority (TRA) Jurisdiction

The mission of the TRA is to promote the public interest by balancing the interests of utility consumers and providers while facilitating the transition to a more competitive environment.

Established in 1996, TRA was created to meet the challenge of the changing telecommunications and utility environment. TRA is charged with the responsibility of setting the rates and service standards of privately owned telephone, natural gas, electric, and water utilities.

Application Process

Depending on the use of the final product, it may be necessary for the project developer to obtain a Certificate of Convenience and Necessity (CCN) from the TRA. Certain other gas pipeline safety regulations may also apply. Therefore, it is recommended that the project developer contact the TRA before a methane gas operation is instituted to determine if a CCN is necessary. If necessary, a CCN application is made by filing a Petition with the TRA and paying a $25 fee.

Review Process

The TRA will make a review of the CCN Petition and may require additional information from the project developer as well as a public hearing. A formal decision on the CCN application will be reached in a public meeting of the TRA Directors.

Review/Approval Period

There is no set rule, regulation, or statute concerning the length of the review period for an energy-related CCN. However, the TRA strives to process such applications in an expeditious manner.

Fees

Annual inspection and supervision fees are required from all utilities under the jurisdiction of the TRA. The minimum fee is $100.

Agency Contacts:

Pat Murphy, Chief of Energy and Water Division
Phone: (615) 741-2904, ext. 178
e-mail: Pat.Murphy@state.tn.us

Glynn Blanton, Chief of Gas Pipeline Safety Division
Phone: (615) 741-2904, ext. 185
e-mail: Glynn.Blanton@state.tn.us

Richard Collier, General Counsel
Phone: (615) 741-2904, ext. 170
e-mail: Richar.Collier@state.tn.us

Tennessee Regulatory Authority (TRA)
460 James Robertson Parkway
Nashville, TN 37243-0505
Fax: (615) 741-2336

2.4 Tennessee Department of Transportation (TDOT)

If landfill gas energy projects are to impinge upon the state of Tennessee right of way, a permit from TDOT must be obtained. There are some restrictions as to where utilities can be located.

Central Right-of-Way Office
600 James K. Polk Building
505 Deaderick Street
Nashville, TN 37243-0337
Phone: (615) 741-3196
Fax: (615) 532-1548
Contacts: Jeff Hoge, Assistant Director
Joe Shaw, State Utilities Coordinator (e-mail: Joe.Shaw@state.tn.us)

Region 1 Right-of-Way Office
7345 Region Lane
Knoxville, TN 37914
Phone: (865) 594-2496
Fax: (865) 594-2495
Contact: Jim Watson, Regional Utilities Coordinator (e-mail: Jim.Watson@state.tn.us)

Region 2 Right-of-Way Office
P.O. Box 22368
4005 Cromwell Road
Chattanooga, TN 37422-2368
Phone: (423) 510-1100
Fax: (423) 510-1131
Contact: Steve Langford, Regional Utilities Coordinator (e-mail: Steve.Langford@state.tn.us)

Region 3 Right-of-Way Office
6601 Centennial Blvd.
Nashville, TN 37243-0360
Phone: (615) 350-4200
Fax: (615) 350-4410
Contact: Jim Nikahd, Regional Utilities Coordinator (e-mail: Jim.Nikahd@state.tn.us)

Region 4 Right-of-Way Office
300 Benchmark Place
Jackson, TN 38301
Phone: (731) 935-0134
Fax: (731) 935-0208
Contact: Charles Green, Regional Utilities Coordinator (e-mail: Charles.Green@state.tn.us)

3. Overview of Local Regulations and Permits

Within the framework of federal and state regulation, local governments may have some jurisdiction over landfill gas energy development in certain cases. Typically, local permits address issues that affect the surrounding community. These permits generally fall under the categories of construction, environment and health, land use, and water quality/use. It should be noted, however, that some local standards and regulations are stricter than state or federal regulations.

Steps to Successful Approval of Local Permits

The following six steps will assist landfill gas energy project developers to achieve successful local permits approval:

Step 1. Determine which local authorities have jurisdiction over the project on the project site(s).

Step 2. Contact the local, city, and/or county planning and public works departments to obtain information about applicable permits and to discuss your plans. Meeting with agency staff to discuss the landfill gas energy project and required permits often helps to expedite the permitting process.

Step 3. Obtain essential information regarding each permit, including:

- What information is required
- The permitting process that should be followed
- Timeframes (including submittal, hearing, and decision dates)

Step 4. Obtain copies of the regulations to compare and verify what is required in the permit applications. If they differ, contact the appropriate permitting agency.

Step 5. Submit a complete application. Incomplete applications typically result in processing delays.

Step 6. Attend meetings or hearing(s) where the application will be discussed to respond to any questions that are raised. Failure to do so could result in delays.

Part 2: Incentive Programs

1. Overview of Federal Incentive Programs

There are three federal incentive programs that may apply to landfill gas energy projects: the Renewable Energy Production Incentive (REPI), Qualifying Facilities (QF) certification, and Section 29 Tax Credit. Each program is described below.

1.1 Renewable Energy Production Incentive (REPI)

The Renewable Energy Production Incentive (REPI), mandated under the Energy Policy Act of 1992, may provide a cash subsidy of up to 1.5 cents per kilowatt-hour to owners and operators of qualified renewable energy sources, such as landfills, that began operation between October 1993 and September 2003. Public sector entities may qualify to earn a cash subsidy based on a tier system. Tier 1 facilities (solar, wind, geothermal, or closed-loop biomass) receive full payments or pro-rata payments if funds are too minimal to match all requests. Any remaining funds fall to Tier 2, which includes landfill gas facilities. If there are insufficient funds to cover Tier 2 applicants, a pro-rata system is implemented. The U.S. Department of Energy (DOE) will make incentive payments for 10 fiscal years, beginning with the fiscal year in which application for payment for electricity generated by the facility is first made and the facility is determined by DOE to be eligible for receipt of an incentive payment. The period for payment under this program ends in fiscal year 2013. REPI payments are subject to adjustment because Congress appropriates REPI payments each year.

For further information, contact:

U.S. Department of Energy
National Renewable Energy Laboratory
Golden Field Office
Golden, CO 80403
Phone: (303) 275-4795
www.eren.doe.gov/power/repi.html

U.S. Department of Energy
Efficiency and Renewable Energy
Forrestal Building, Mail Station EE-10
1000 Independence Avenue, S.W.
Washington, DC 20585
Phone: (202) 586-2206

1.2 Qualifying Facilities Certification

Landfill gas energy projects that generate electricity will benefit from the Qualifying Facilities (QF) certification, which is granted through the Federal Energy Regulatory Commission (FERC). The following information describes the benefits of QF status and the steps for applying for such status.

The Public Utility Regulatory Policies Act (PURPA), one of five parts of the National Energy Act of 1978, was designed to promote conservation of energy and energy security by removing barriers to the development of cogeneration facilities and facilities that employ waste or renewable fuels. Such facilities are called Qualifying Facilities or QFs. Under PURPA, utilities are required to purchase electricity from QFs at each utility's avoided cost of generating power. PURPA provides that a small power production facility, such as a landfill gas energy project that meets FERC standards, can become a QF.

In order to apply for QF status, applicants must prepare either: (1) a Notice of Self-Certification, which asserts compliance with the FERC's technical and ownership criteria; or (2) an Application for Commission Certification of Qualifying Status, which requires a draft Federal Register notice and provides actual FERC approval of QF status. In either case, the applicant must also file Form 565, which is a list of questions

about the project, and must pay any filing fees associated with certifications, exemptions, and other activities. FERC will provide the QF "Info Packet," which describes the necessary steps, requirements, and background information. After submittal of the initial application, further justifications and submittal of information may be required.

For the QF Info Packet and applications, contact:

Federal Energy Regulatory Commission
Qualifying Facilities Division
825 North Capitol Street, N.E.
Washington, DC 20426
Phone: (202) 208-0577
www.ferc.fed.us

1.3 Section 29 Tax Credit

Developers of landfill gas energy projects who sell landfill gas to an unrelated third party may qualify for a tax credit under Section 29 of the Internal Revenue Service (IRS) tax code. In order to take advantage of the credits, project developers may bring in an outside party when developing power projects. The Section 29 tax credit was established in 1979 to encourage development of unconventional gas resources, such as landfill gas. Section 29 tax credits are available through 2007 to landfill gas projects that had binding contracts in place by December 31, 1996 and were placed in service by June 30, 1998. The credit has been extended several times by the U.S. Congress. Currently, it is discontinued.

2. State Incentive Programs

2.1 Green Power Switch®

Tennessee Valley Authority (TVA) and local public power companies, working with input from the environmental community, have created a program called Green Power Switch® to produce electricity from cleaner, greener sources and incorporate the electricity into the Tennessee Valley's power mix. The program was started for two main reasons:

1. TVA's mission to improve quality of life while minimizing the negative environmental impact of business.
2. The customer wanted an environmental energy alternative.

Green Power Switch® began on Earth Day 2000 and is expanding to consumers throughout the Tennessee Valley as more resources for generating renewable power become available.

In the start-up stage of Green Power Switch®, methane gas from landfills will provide the largest source of cleaner energy. At present, TVA has two sources of methane gas: the Middle Point Landfill near Murfreesboro, Tennessee, and the City of Memphis Wastewater Treatment Plant, which produces a methane by-product that is co-fired at TVA's Allen Fossil Plant.

Contact Information:

Gary Harris
Manager of Green Power Switch®
Phone: (615) 232-6124
e-mail: ghharris@tva.gov

2.2 Renewable Portfolio Standard

The Renewable Portfolio Standard (RPS) is a plan to generate more clean power from sustainable and secure energy sources. The state of Tennessee does not presently have a state-implemented Renewable Portfolio Standard (RPS). The state has closely followed a national RPS that will require utility companies to use alternative energy sources to generate electricity by setting a goal of at least 20 percent of the overall power mix to come from clean and sustainable sources by 2020.

Contact Information:

Thomas W. Swanson
Manager Power Resources & Operations Planning
Phone: (423) 751-6741
e-mail: twswanson@tva.gov

3. Electricity Restructuring and Landfill Gas Energy

What Is Electricity Restructuring?

Electricity restructuring refers to the introduction of competition into both the wholesale and retail electricity markets. Until now, electric utilities operated as monopolies authorized by federal and state regulatory authorities as the sole provider of electric service to consumers within a specific service territory. Under restructuring, utilities will lose these monopolies, enabling other energy providers to compete for their customers. With retail choice, independent power producers are allowed to sell energy directly to retail customers utilizing both the transmission grid in the region and the distribution system of the local electric utility. The desired result is more energy options for consumers, lower energy prices, and greater use of renewable energy sources.

Efforts to restructure the electric utility industry began in 1978 with passage of the Public Utilities Regulatory Policies Act (PURPA), which required utilities to buy a portion of their power from unregulated power generators in an effort to encourage the development of smaller generating facilities, new technologies, and renewable energy sources. The National Energy Policy Act of 1992 (EPACT) expanded on PURPA, allowing more types of unregulated companies to generate and sell electricity, effectively creating a competitive wholesale market for electric power.

Restructuring at the retail level has been a hot issue in many states since the passage of EPACT, which delegated to states the authority to introduce competition among electric utilities within their borders. As of January 2002, 18 states and the District of Columbia have either enacted enabling legislation or issued a regulatory order to implement retail access. Retail access in these jurisdictions is either currently available to all or some customers or will soon be available. Six states have either passed legislation or issued regulatory orders to delay implementing retail access. Twenty-six states, including Tennessee, have not enacted enabling legislation to restructure the electric power industry or implement retail access. After being first to enact retail choice, California has suspended direct retail access.

Get the Latest Information on Electricity Restructuring in Your State

For up-to-date information on electricity restructuring in Tennessee, visit the U.S. DOE Web site at www.eia.doe.gov/cneaf/electricity/page/restructure.html and the National Conference of State Legislatures Web site at www.ncsl.org/programs/esnr/restru.htm.

4. Voluntary Reporting of Greenhouse Gases Program

The Voluntary Reporting of Greenhouse Gases Program, created by Congress under Section 1605(b) of the Energy Policy Act of 1992, provides an opportunity for any company, organization, or individual to establish a public record of their greenhouse gas emissions, reductions, or sequestration achievements in a national database. The data submitted to the program is made publicly available via CD-ROM and the Internet. Those who report to 1605(b) can gain recognition for environmental stewardship, demonstrate support for voluntary approach toward achieving environmental policy goals, support information exchange, and inform the public debate about greenhouse gas emissions.

Additional information about the program, as well as reporting forms and technical assistance, are available through Energy Information Administration's (EIA's) Communications Center by calling (202) 586-0688 or toll free at (800) 803-5182, via e-mail at infoghg@eia.doe.gov, and on the program's Web site at www.eia.doe.gov/oiaf/1605/frntvrgg.html.